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AUTHOR Oestereicher, Mary
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ABSTRACT

College dropout rate as a function of poor fit between institution and students has been studied extensively, but how this phenomenon operates for disadvantaged students is not adequately understood. This study examines the effects of a project that attempts to use peer relationships--tutoring and mentoring--to improve academic performance and stem attrition among disadvantaged college students. Students who received tutoring/mentoring were compared to students who did not on the following measures: (1) course grades; (2) grade point average; (3) re-enrollment; (4) pretest and posttest scores on surveys of study habits and attitudes; and (5) a questionnaire. The students who were mentored were also asked questions about their satisfaction with the program. The results seemed to indicate that peer tutoring had a positive impact on the academic integration of disadvantaged students. Mentored students earned better grades and there was less deterioration in their attitudes. They found the program useful and would recommend it to others. Further data analysis is needed to determine whether the differences are significant. The progress of the students over a longer period of time is being followed. A list of 10 references is provided. (VM)

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EFFECTIVENESS OF PEER TUTOR/MENTORS FOR DISADVANTAGED STUDENTS AT BROOKLYN COLLEGE: PRELIMINARY ANALYSES

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MARY OESTEREICHER[1]

BACKGROUND

National studies of attrition among the general population of college students are very firm in their conclusions about the heavy contribution of weak academic performance to college withdrawal (e.g., Beal and Noel, 1980; Ramist, 1981). Indeed according to a recent survey, almost half of college freshmen "decided to attend college largely to improve their reading ability" (N.Y. Times, 10/31/86). Such findings are extremely suggestive of the dimensions of the academic problems of the underprepared student. In fact, data gathered on Search for Education, Elevation, and Knowledge (SEEK) students who enter Brooklyn College as freshmen show that the majority generally do not persist long and leave with a grade point average of less than 2.00.

Surprisingly, although college attrition as a function of poor fit between institution and students in general has been quite extensively investigated, attrition among disadvantaged students, in particular, has received inadequate formal study (Tinto, 1982). The work of Fox, who applied Tinto's model of college withdrawal to SEEK students at a senior branch of CUNY (Fox, 1985), is a notable exception. He found that "academic integration was the most salient aspect of development for this group of students." (p.2) Further, just one of his diverse measures of "social integration" was found to bear a significant correlation with persistence: the extent and quality of peer relationships (as defined by Pascarella and Terenzini, 1980).

The question arises: can a formal program using such peer relationships be designed to improve academic performance and stem attrition among disadvantaged students? Considerable research has been done on the most effective ways to initiate new members into non-academic settings, particularly in business. One widely accepted policy is to assign to each new member a mentor who has proven ability in the specific job and who has good interpersonal skills; if this is not done new members may choose their own unofficial mentors who are less than acceptable role models. The mentor's role is to introduce the novice to the surroundings, guide his or her work, and generally serve as an adviser and intermediary between the organization and the new member. Making the human process a learning one makes the learning process a human one. Peer tutoring/mentoring unites the two important factors of academic integration and social integration with peers. Not only does it directly support student progress in coursework; it also offers an exceptionally supportive kind of social integration by developing relationships between mentor and student and among the students themselves under the guidance of the mentor. In addition, the mentor often serves as an agent, introducing the students to other people and other resources at the College.

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Many studies, of course, report improving academic performance through tutoring (see especially Hedin, 1986). Abrams and Jernigan (1984), to cite one good example, have recently demonstrated the effectiveness of support services for high risk college students with respect to time spent using such services and frequency of contracts with tutors. The extra component of mentoring that makes it a more personal process than tutoring can reasonably be expected to strengthen such findings. The research literature on peer tutors shows that tutors effect study skills change in freshmen as well as professional teachers do (Fremouw and Feindler, 1978). It is worth noting that according to the critical review of the literature on mentoring carried out by Merriam (1983), there have been no adequate data-based studies on the effectiveness of mentoring in educational settings.

GOALS OF THE PROJECT

Taking note of the promising signposts in the literature, it was determined that a peer tutoring/mentoring project would be implemented with a view to improving student performance among the SEEK population at Brooklyn College and that the project would be evaluated in terms of change in both the attitude and the actual performance of students.

FURTHER DEFINING THE TUTOR/MENTOR

What is a peer tutor/mentor? This question can best be answered through considering both what a peer tutor/mentor is and is not. The mentor is not a co-instructor and has no role in determining the syllabus or providing regular instructions. Nor is the peer tutor/mentor an isolated tutor, i.e., a person who provides supplementary instruction separate in input and feedback from instructor and classwork. The peer tutor/mentor plays a special role defined by background, attitude, and function. Background: The peer tutor/mentor has successfully completed the specific course to which he/she is assigned and possesses both familiarity with the course material and the requisite practical skills, including the ability to explain concepts and present a viewpoint in both speech and writing. The peer tutor/mentor also has fresh memories of the student view of assignments and other experiences. Attitude: The peer tutor/mentor is student-oriented, i.e., concerned with and eager for the success of all students. The peer tutor/mentor must also share the instructor's concern with professionalism and must be committed to rigorous student work under the instructor's direction. Function: The peer tutor/mentor plays roles both in class and out. The peer tutor/mentor is regularly present in class for continuous familiarity with class lectures, discussions, and assignments, observation of student performance, opportunities for specific instructions for tutorial sessions, and impression on the students of a close association and mutual respect between instructor and mentor. Outside the classroom, the peer tutor/mentor's role includes the traditional aspects of tutoring but is enriched by the close connection to coursework and instructor. The instructor can easily consult with the peer tutor/mentor and indicate specific students or groups of students in need of supplementary work, and can rely on the mentor to assign and check such work. Thus, with no major increase in the instructor's responsibilities, supervised student "time on task" can be substantially increased.

In addition, the peer tutor/mentor's affective impact both in and out of class is, of course, often great. It draws on the students' natural respect for one who has already done well in a course they are taking, a constant reminder that their own goals are attainable. The peer tutor/mentor is a model of seriousness of purpose and proficiency in study skills and communications skills. He or she is also a model for open communication with the instructor and yet retains the ability to "speak the same language" as the students, who may be frustrated, demotivated, or beset by personal problems. Rather than merely being an intermediary between student and instructor, the peer tutor/mentor is a mediator

between student and the goal of success in the course. Further, the mentor can help the student to see the instructor as having a similar role.

DESIGN

The major hypothesis was that peer tutor/mentoring would have a positive effect on the college careers of the experimental SEEK students by comparison with those of the control SEEK students as reflected in the following:

1) mentored-course grade;

2) subsequent academic performance in college;

3) study habits and attitudes as indicated by the Brown/Holtzman Survey of Study Habits and Attitudes (Brown and Holtzman, 1968).

Twelve classes enrolling substantial numbers of SEEK students in the Spring 1985 semester were identified: 6 classes in Core Studies 1, Classical Origins of Western Culture; 2 classes in Core Studies 4, the Shaping of the Modern World; 4 classes in Developmental Writing. The total number of SEEK students was 114. A random assignment of half the classes to experimental status and half to control status was then made for each of the three courses. A peer tutor/mentor was provided for the SEEK students in each of the experimental classes and none was provided for the control classes. The peer tutor/mentors were all congenial, articulate SEEK and/or minority students who had recently completed the course in question with a grade of A. All of the six selected were black females. They were to encourage the participation of their potential mentees and to be available as role models and homework helpers for five hours per week. They were required to attend class with the students at least once a week. They participated in brief training sessions and kept logs of their work. The number of SEEK students in the classes with the peer tutor/mentors (experimental) was 66 (30 Core, 36 Writing). The number of SEEK students in the classes with no peer tutor/mentor (control) was 48 (22 Core, 26 Writing).

It should be noted that despite attempts to make experimental and control groups comparable, there are some differences in the two groups that need to be considered in thinking about the results. First, the entire group of controls appears to have begun with an academic advantage since they had spent 13% more time in school and had earned 19% more credits. This may indicate that they have already shown themselves to be more academically successful than the experimental group. Second, in the case of the writing students, the experimental group started out with an academic advantage; among those who had previously taken courses the experimental group had a higher grade point average (1.87) than the controls (.88). Apparently the writing students had been unofficially grouped according to ability.

RESULTS

Course Grades During the Semester of Mentoring. The basic comparison to make between the two groups is in terms of grades in the mentored courses (for the Spring 1985 semester). Although the differences are not startling, all of the mentored classes did better than the controls. In mentored Core Studies 1 the average grade was 1.44, control was 1.27; in Core Studies 4 the mentored group received 1.75, the unmentored 1.50; the mentored writing classes averaged 2.21, the unmentored 2.00.

Thus, the mentored students in all three courses fared better than the unmentored students. However, in the case of the writing course it may simply be the unofficial ability grouping rather than the mentoring that is creating the difference in grades.

Grade Point Average For Semester After Program. Most interesting is a direct comparison of the Core Studies experimental and control students' grade point averages for the semester after the mentoring project, Fall 1985. (Here Core Studies 1 and 4 are combined.) Twenty-three mentored students and eighteen control students completed the Fall, 1985 semester. The two sets of students had identical indices of 1.90 when they entered the experimental project after the Fall, 1984 semester. Their averages for the Fall, 1985 semester are 1.71 for students formerly in mentored Core classes, and 1.54 for controls. This suggests that mentoring may not only have improved the students' grades in the course, but may also have impacted the students' basic approach to school work enough to help them maintain their advantage in the following semester.

Because of the unofficial ability grouping among the writing students discussed earlier, it is difficult to draw conclusions about their performance in the semester after the peer tutoring took place. Nevertheless, the data for that semester are as follows: Among students who had previously had some college work, the Fall 1985 average of the mentored group was 1.35 while the non-mentored group averaged .88. In the case of the two writing classes who had not had college work prior to the project semester, the 12 experimental students averaged 1.58 and the 11 controls achieved a 2.10 average in the Fall of 1985. Again, this information is of limited use since the groups apparently were not comparable at the outset.

Re-enrollment at Brooklyn College. When re-enrollment is considered, no substantial difference appears. Fifty-four percent of the controls were still attending Brooklyn College in the Spring of 1986, while 51% of the mentored (not including 1 who graduated) were in attendance. However, re-enrollment at Brooklyn College is not a particularly meaningful statistic, since both transfers (and it is known that some mentored students were counseled to transfer to community colleges) and school-leavers are combined together in calculating college attrition statistics. Unfortunately, we were not able to break this category down.

Pretest/Posttest Results on Brown/Holtzman Survey of Study Habits and Attitudes. The Brown/Holtzman Survey of Study Habits and Attitudes (normed on college freshmen) is a 100 item questionnaire yielding four component subscores: Delay Avoidance - "promptness in completing academic assignments, lack of procrastination, and freedom from wasteful delay and distraction"; Work Methods - "use of effective study procedures, efficiency in doing academic assignments, and how-to-study skills"; Teacher Approval - "opinions of teachers and their classroom behavior and methods"; Education Acceptance - "approval of educational objectives, practices, and requirements." The Brown/Holtzman survey also yields a single composite overall score, titled "Student Orientation".

Examination of the means of the overall scores of the SSHA, Student Orientation, reveal considerable differences in the reactions of control and experimental students to college work. Attitudes of both groups became more negative. However, the attitudes of the mentored group because less negative than those of the control group. They moved from the 40th to the 35th percentile while the controls fell from the 60th to the 35th percentile. In fact, when the Core students are separated from the Writing students, a slightly different picture emerges. The mentored Core classes actually show a slight positive change from the 35th to the 40th percentile contrasting with a slight drop on the part of the controls from the 65th to the 60th percentile.

In both control and experimental groups the primary positive change among individuals in the Core classes who were tested both pre and post program was in the teacher approval subtest, which is

designed to "measure opinions of teachers and their classroom behavior and methods." The 13 mentored students moved from the 45th to the 50th percentile, the 7 controls from the 40th to the 45th. Both groups improved, a gentle compliment to the faculty.

However, in all other subtests the Core controls showed far superior attitudes to school work both before and after the program. For example, though Core controls dropped from the 80th percentile to the 65th on Delay Avoidance; the experimentals, despite a small rise from the 40th toward the 45th percentile, were still far behind. In the Work Methods subtest the controls moved from the 70th to the 60th percentile, while the experimentals dropped from the 30th to the 25th. In Education Acceptance the controls remained at the 60th percentile, while the experimentals remained at the 35th.

The fact that the Core experimentals achieved better grades both in the course and in their averages for the Fall '85 semester, despite being far behind the Core controls in the habits and attitudes thought requisite for academic success, suggests that the peer tutor/mentoring may have had a considerable impact.

Although the mentored and the non-mentored writing students both showed more negative study habits and attitudes after their experience of being mentored, the mentored group dropped only from the 35th to the 30th percentile while the non-mentored students dropped from the 50th to the 20th percentile. However, as described above, the two sets of writing students are not comparable, making interpretations of this finding difficult.

Program Questionnaire Results. An end-of-program questionnaire distributed to all participants was answered by 52% (34) of the experimental group and 42% (20) of the controls. To the question: "How much did you need help with this course?" 41% of the mentored and 30% of the controls indicated "some need," and 18% of the mentored and 9% of the controls stated "little need." Assigning a value of one to three to these categories and equating one with "great need" results in an average of 1.76 for the experimentals and 1.85 for the controls. The mentored admitted to a slightly greater need for help. More interesting, perhaps, is the relative polarization of the experimentals' response. That is, exposure to the program seems to have resulted in more students admitting they were in great need of help and more denying it.

A second question, "How much help did you get with this course?" was answered by the same percentages of the two groups as was the question above. 65% of the mentored and 55% of the controls said they had received "great help," 29% of the mentored and 30% of the controls said "some help," while 6% of the mentored and 9% of the controls said "little help." Thus, the mentored consistently responded more positively to this question.

Satisfaction of Students in Mentored Classes. A further series of questions was asked only of the students in the mentored classes. A smaller number, 21-23 (32% - 35%) responded. "Did you see an improvement in your course work from mentoring?" 41% said they saw a "great improvement," 50% saw "some improvement," and 9% saw "little improvement." That 41% of the respondents see "great improvement" in their work resulting directly from mentoring is high praise indeed. Two other questions, "Did the mentor seem to be a person whose experience you could learn from?" and "Did the mentor have any impact on the way you see yourself and/or your college work and/or this course?" were answered quite similarly, 67% saying "yes" and 33% saying "no" to the first question; while 65% said "yes" to the second and 35% said "no." These responses are quite favorable indicating a high personal regard for the mentors and their effectiveness. More important, however, is the final question: "Would you recommend mentoring to other students?" Ninety-six percent of the respondents said "yes."

CONCLUSION

Despite such problems in the study as non-comparable writing classes and low return rates among some groups on some program measures, the results of the project all seem to point in the same direction: Peer tutoring has a positive impact on the academic integration of disadvantaged students. Mentored students got better grades in the course, had better grade averages in the semester following the project, and had less deterioration in attitudes shown to be indicators of academic success. Further, the students themselves found the program useful, and an overwhelming majority were willing to recommend it to others - all of this despite the fact that attitudinal measures showed them to be much less promising candidates for academic success than the control group.

The comparisons of mentored course grades, grade averages in the following semester and changes in study habits and attitudes presented here must be seen as preliminary and exploratory. Further analysis of the data are presently being conducted to determine whether the grade differences between mentored and unmentored students are statistically significant. In addition, the progress of the students over a longer period of time is being followed.

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